

Notice of Allowability

Application No.

10/776,540

Examiner

Irakli Kiknadze

Applicant(s)

SMITH, RICKY

Art Unit

2882

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the Amendment filed 03/05/2007.
2. ☒ The allowed claim(s) is/are 1-4,6-12,15,16 and 19-40.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|--|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),
Paper No./Mail Date <u>11/12/2007</u> | 7. <input type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

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DETAILED ACTION

1. In response to the Office action dated October 5, 2006 the Amendment has been received on March 5, 2007.

Claims 1 and 20 have been amended.

Claims 1-4, 6-12, 15, 16 and 19-40 are currently pending in this application.

Allowable Subject Matter

2. Claims 1-4, 6-12, 15, 16 and 19-40 are allowed.

3. The following is an examiner's statement of reasons for allowance:

Claim 1 is allowed because prior art fails to teach or make obvious a cathode head suitable for use in an x-ray device and the cathode head comprising: at least a portion of an emitter being positioned within an emitter block, and at least one magnetic element that defines an opening within which a portion of the emitter is positioned as claimed including all of the remaining limitations of the claim. Claims 2-9 and 33 are allowed by virtue of their dependence.

Claim 10 is allowed because prior art fails to teach or make obvious a cathode head suitable for use in an x-ray device comprising: a magnetic emitter block; and means for facilitating focal spot control, wherein the means generates a magnetic field with a magnetic flux density having flux lines that are substantially perpendicular to a

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direction of travel of an electron beam as claimed including all of the remaining limitations of the claim. Claims 11, 12, 15, 16 and 19 are allowed by virtue of their dependence.

Claim 20 is allowed because prior art fails to teach or make obvious an x-ray device, comprising: a cathode head comprising the following elements, each of which is substantially disposed within a vacuum enclosure: an emitter block; an emitter attached to the emitter block and configured to emit electrons of an electron beam that defines a focal spot on the target surface of the anode; and at least one magnetic element that defines an opening within which a portion of the emitter is positioned as claimed including all of the remaining limitations of the claim. Claims 21-28 and 34 are allowed by virtue of their dependence.

Claim 29 is allowed because prior art fails to teach or make obvious a cathode head suitable for use in an x-ray device and comprising: a filament attached to an emitter block and defining a longitudinal axis and first and second magnetic elements that define respective openings within which the emitter block is positioned as claimed including all of the limitations of the claim. Claims 30-32 and 35-39 are allowed by virtue of their dependence.

Claim 40 is allowed because prior art fails to teach or make obvious a cathode head suitable for use in an x-ray device comprising: a magnetic emitter block; and at least one magnetic element arranged such that flux lines of a magnetic flux density of a magnetic field associated with the at least one magnetic element are substantially

perpendicular to a direction of travel of the electron beam as claimed including all of the remaining limitations of the claim.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Response to Arguments

4. Applicant's arguments, see pages 7-11, filed March 5, 2007, with respect to claims 1-4, 6-12, 15, 16, 19-28, 33, 34 and 40 have been fully considered and are persuasive. The rejection of claims 1-4, 6-12, 15, 16, 19-28, 33, 34 and 40 has been withdrawn.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Haberrecker (US Patent 4,819,260), Dumitrescu et al. (US Patent 5,224,143), Chidester et al. (US Patent 6,438,207 B1), Evain et al. (US Patent 5,125,019) and Lemaitre et al. (US Patent 6,968,039 B2) teach the focal spot position adjustment systems for the x-ray imaging tubes.

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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Irakli Kiknadze whose telephone number is 571-272-2493. The examiner can normally be reached on 9:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on 571-272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Irakli Kiknadze
March 15, 2007

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EDWARD J. GLICK
SUPERVISORY PATENT EXAMINER